

13:42:29 2004

us-09-424-686f-10.res

icg

visé Comparison of Sequences

-424-686f-10.res made by tport on Tue 20 Apr 104 13:41:22-PDT.

ig compared:US-09-424-686F-10 (1-3824)
3 searched: 74
bove cutoff: 74

re initial comparison of US-09-424-686F-10 (1-3824) with:
1809.seq

★	★	★
163	844	1125
2	3	4
1407	1688	1969
2251	2532	2532
7	8	8

PARAMETERS

	Unitary	K-tuple	Joining penalty	Window size
	1		30	
	5.00		500	
	0.33			
	1			
	0			

SEARCH STATISTICS

Mean	Median	Standard Deviation
68	14	315.92

Total Elapsed
00:00:00.00

00:00:00.01

3 searched:	74	31716
bove cutoff:	74	

re sorted by initial score.
culated based on initial score.

sequence to the query sequence was not found.

cores is:

Sequence Name	Description	Init. Opt.	Length	Score	Score S
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1. US-08-851-843A-2 Sequence 224, Application 4015 2532

1. US-09-424-686F-10 (1-3824)
US-08-851-843A-2 Sequence 224, Application US/08851843A
same SEQ 224 as in 6, 26.

Initial Score	=	2532	Optimized Score	=	3716	Significance	=
Residue Identity	=	94%	Matches	=	3797	Mismatches	=
Gaps	=	218	Conservative Substitutions	=			=

GTTTCAGGCAGCGCTGCGTCCGTGCTGCGCACGTGGGAAGCCCTGGCCCGCGGCACCCCCGCGGATGC
 GCAGCGCTGCGTCCGTGCTGCGCACGTGGGAAGCCCTGGCCCGCGGCACCCCCGCGGATGC
 X 10 20 30 40 50 60

CTCCCGCTGCGAGCCGTGCGTCCCTGCTGCGCAGCCACTACCGAGGTGCTGCCGCTGGCCA
CTCCCGCTGCGAGCCGTGCGTCCCTGCTGCGCAGCCACTACCGAGGTGCTGCCGCTGGCCA

150 160 170 180 190 200 210
TGGGGCGCCCTGGGGCCCCAGGSGTGGCGGCTGGTGACGCGGGGAGCCCGCGGCTTCCGCGCGC
TGGGGCGCCCTGGGGCCCCAGGSGTGGCGGCTGGTGACGCGGGGAGCCCGCGGCTTCCGCGCGC

[illegible]

290 300 310 320 330 340 350
GCCTGAAGGAGCTGGTGGCCCGAGTCTGCAGAGGCTGTCCGAGCGCGCGGAAGAACGTGCTGG
|||||
GCCTGAAGGAGCTGGTGGCCCGAGTCTGCAGAGGCTGTCCGAGCGCGCGGAAGAACGTGCTGG
|||||

370 380 390 400 410 420
GCTTCGCGCTGCTGGACGGGGCCCGCGGGGGCCCCCGAGGCCCTTACACACGCGTGCGCAGCT
GCTTCGCGCTGCTGGACGGGGCCCGCGGGGGCCCCCGAGGCCCTTACACACGCGTGCGCAGCT

440 450 460 470 480 490
C C A A C A C G G T A C C G A C G A C T G C G G G G G A G C G G G C G T G G G G C T G C T G C T G C C C G C G T G G G C G
C C A A C A C G G T A C C G A C G A C T G C G G G G G A G C G G G C G T G G G G C T G C T G C T G C C C G C G T G G G C G

510 520 530 540 550 560 570
TGCTGGTTCACTGCTGGACGCTGCGCGCTCTTTGTGCTGGTGGTCCAGTCCGCTACCCAGG
TGCTGGTTCACTGCTGGACGCTGCGCGCTCTTTGTGCTGGTGGTCCAGTCCGCTACCCAGG

GGCGCGGCTGTACAGCTCGGCGTGCCACTCAGGCCGGCCCCCGGCACACGCTAGTGGACCCC
GGCGCGGCTGTACAGCTCGGCGTGCCACTCAGGCCGGCCCCCGGCACACGCTAGTGGACCCC
GGCGCGGCTGTACAGCTCGGCGTGCCACTCAGGCCGGCCCCCGGCACACGCTAGTGGACCCC

650 660 670 680 690 700 710
 GTCTGGGATCGGAACGGGCCTGGAAACCATAGCGTCAGGAGGCCGGGGTCCCCCTGGGCTGCCAG
 |||||
 GTCTGGGATCGGAACGGGCCTGGAAACCATAGCGTCAGGAGGCCGGGGTCCCCCTGGGCTGCCAG
 |||||

740 750 760 770 780 790
GGGCGAGTGCACGCCGGAAGTCTGCCGTTGCCCAAGAGGCCCCAGGCGTGGCGCTGCC
|||||
GGGCGAGTGCACGCCGGAAGTCTGCCGTTGCCCAAGAGGCCCCAGGCGTGGCGCTGCC
30 740 750 760 770 780
810 820 830 840 850 860
CGCCGTTGGCGAGGGTCTTGGGCCACCCGGGAGGACGCGTGGACCGAGTGACC
|||||
CGCCGTTGGCGAGGGTCTTGGGCCACCCGGGAGGACGCGTGGACCGAGTGACC
810 820 830 840 850
0 890 900 910 920 930
TGTCACCTGCCAGACCCGGCGAAGAACCTCTTTGGAGGGTGGCTCTCTGGCA
|||||
TGTCACCTGCCAGACCCGGCGAAGAACCTCTTTGGAGGGTGGCTCTCTGGCA
880 890 900 910 920
CATCGTGGGCGCCAGACCAACGCGGGCCCCCATCCACATCGGGCCACCAACGTC
|||||
CATCGTGGGCGCCAGACCAACGCGGGCCCCCATCCACATCGGGCCACCAACGTC
950 960 970 980 990 1000
1030 1040 1050 1060 1070 1080
GTCCCCCGGTGTACGCCGAGACCAAGCACTTCCTCTACTCCTCAGCGACAAAGGAGC
|||||
GTCCCCCGGTGTACGCCGAGACCAAGCACTTCCTCTACTCCTCAGCGACAAAGGAGC
1020 1030 1040 1050 1060 1070
1100 1110 1120 1130 1140 1150
TCCTACTCAGCTCTCTGAGGCCAGCCTGACTGGCGCTCGGAGGCTCGTGGAGACCA
|||||
TCCTACTCAGCTCTCTGAGGCCAGCCTGACTGGCGCTCGGAGGCTCGTGGAGACCA
90 1100 1110 1120 1130 1140
170 1180 1190 1200 1210 1220
3GCCCTGGATGCCAGGACTCCCCGAGTTGCCCGCCCTACGGGGTGCTCCTCAAGACGC
|||||
3GCCCTGGATGCCAGGACTCCCCGAGTTGCCCGCCCTACGGGGTGCTCCTCAAGACGC
1170 1180 1190 1200 1210
0 1250 1260 1270 1280 1290
TTCTGGAGCTGCTTGGGAACACGCGCAGTGCCCCCTACGGGGTGCTCCTCAAGACGC
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TTCTGGAGCTGCTTGGGAACACGCGCAGTGCCCCCTACGGGGTGCTCCTCAAGACGC
1240 1250 1260 1270 1280
1320 1330 1340 1350 1360
TTGCGGTCAACCCAGCAGCCGGTGCTGTGTGCCCGGAGAAAGCCCCAGGGCTCTGTGG
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TTGCGGTCAACCCAGCAGCCGGTGCTGTGTGCCCGGAGAAAGCCCCAGGGCTCTGTGG
1310 1320 1330 1340 1350 1360
1390 1400 1410 1420 1430 1440
AGGACACAGACCCCGTGCCTGGTGCAGTGTCCGCCAGACACAGCAGCCCCCTGGC
|||||
AGGACACAGACCCCGTGCCTGGTGCAGTGTCCGCCAGACACAGCAGCCCCCTGGC
1380 1390 1400 1410 1420 1430
1460 1470 1480 1490 1500 1510
FGCGGGCTGCCTGGCGCGGTGGTGCCCCCAGGCCCTCTGGGGCTCCAGGCACAACG
|||||
FGCGGGCTGCCTGGCGCGGTGGTGCCCCCAGGCCCTCTGGGGCTCCAGGCACAACG
50 1460 1470 1480 1490 1500
530 1540 1550 1560 1570 1580
3GAACACCAAGAAGTTCACTCCCTGGGAAGCATGCCAAGCTCTCGCTGCAGGAGC
|||||
3GAACACCAAGAAGTTCACTCCCTGGGAAGCATGCCAAGCTCTCGCTGCAGGAGC
1530 1540 1550 1560 1570

1590	1600	1610	1620	1630	1640	1650
TGACGTGGAAGATGAGCGTGGCGGACTGCGCTGGCTGGCTGGCAGAGAGCCAGGGGTGGCTGTGTTC						
1580	1590	1600	1610	1620	1630	1640
TGACGTGGAAGATGAGCGTGGCGGACTGCGCTGGCTGGCTGGCAGGAGCCAGGGGTGGCTGTGTTC						
1660	1670	1680	1690	1700	1710	1720
CAGAGCACCGTCTGCGTGAGGAGATCCTGGCCAAAGTTCTTGACATGGCTGATGAGTGTGTACGTCG						
1650	1660	1670	1680	1690	1700	1710
CAGAGCACCGTCTGCGTGAGGAGATCCTGGCCAAAGTTCTTGACATGGCTGATGAGTGTGTACGTCG						
1730	1740	1750	1760	1770	1780	1790
TGCTCAGGTCTTCTTTATGTACCGGAGACCAAGTTTCAAAAGAACAGGCTCTTTTCTACCCGG						
1720	1730	1740	1750	1760	1770	1780
TGCTCAGGTCTTCTTTATGTACCGGAGACCAAGTTTCAAAAGAACAGGCTCTTTTCTACCCGG						
1810	1820	1830	1840	1850	1860	1870
TCTGGAGCAAGTTGCAAGCATTTGGAATCAGACAGCACTTGAAGAGGGTGAGCTGCGGGAGCTGT						
1800	1810	1820	1830	1840	1850	1860
TCTGGAGCAAGTTGCAAGCATTTGGAATCAGACAGCACTTGAAGAGGGTGAGCTGCGGGAGCTGT						
1880	1890	1900	1910	1920	1930	194
CAGAGTTCAGGCAGCATCGGGAAGCCAGGCCCGCCCTGCTGACGTCCAGACTCCGCTTCATCCCCA						
1870	1880	1890	1900	1910	1920	1930
CAGAGTTCAGGCAGCATCGGGAAGCCAGGCCCGCCCTGCTGACGTCCAGACTCCGCTTCATCCCCA						
1950	1960	1970	1980	1990	2000	2010
ACGGCTGCGGCCGATTGTGAACATGACTACGTCTGCTGGAGCCAGAACGTTCCGCAGAGAAAGAG						
1940	1950	1960	1970	1980	1990	2000
ACGGCTGCGGCCGATTGTGAACATGACTACGTCTGCTGGAGCCAGAACGTTCCGCAGAGAAAGAG						
2020	2030	2040	2050	2060	2070	2080
AGCGTCTACCTCGAGGGTGAAGGCACTGTTCAAGCGTGTCAACTACGAGCGGGCGCGGCCCGG						
2010	2020	2030	2040	2050	2060	2070
AGCGTCTACCTCGAGGGTGAAGGCACTGTTCAAGCGTGTCAACTACGAGCGGGCGCGGCCCGG						
2090	2100	2110	2120	2130	2140	2150
TGGCGCCTCTGTGCTGGCCCTGGACGATATCCACAGGGCCTGGCGCACCTTCGTGCTGCGTGTGG						
2080	2090	2100	2110	2120	2130	2140
TGGCGCCTCTGTGCTGGCCCTGGACGATATCCACAGGGCCTGGCGCACCTTCGTGCTGCGTGTGG						
2170	2180	2190	2200	2210	2220	2230
AGGACCGCGCCCTGAGCTGTA-----CATCCCCCA						
2160	2170	2180	2190	2200	2210	2220
AGGACCGCGCCCTGAGCTGTA-----CATCCCCCA						
2200	2210	2220	2230	2240	2250	2260
GGCTACGGAGGTATCGCCAGCATCATCAACCCCGAGAACCTACTGCGTGGTATGCGGTATGCGGT						
2230	2240	2250	2260	2270	2280	2290
GGCTACGGAGGTATCGCCAGCATCATCAACCCCGAGAACCTACTGCGTGGTATGCGGTATGCGGT						
2270	2280	2290	2300	2310	2320	2330
AGAAGCGCGCCCATGGGCACGTCCGCAAGGCCTTCAAG-----						
2300	2310	2320	2330	2340	2350	2360
AGAAGCGCGCCCATGGGCACGTCCGCAAGGCCTTCAAGACCCACGTCTCTACCTTGACAGACCTCCA						
2370	2380	2390	2400	2410	2420	2430
ACATGCGACAGTTCTGCTGCTCACCCTGCAGGAGACCCAGCCCGCTGAGGGATGCCGTGCTCATCGAGCA						

GCCAGCAGTGGCCTCTTCGACGTCTTCCTACGCTTTCATGTGCCACACGCCGTGGCGA
2460 2470 2480 2490 2500 2510

2320 2330 2340 2350 2360 2370
TACGTCCAGTGCAGGGATCCCGCAGGCTCCATCCTCTCCACGTGCTCTGCAGCC
TACGTCCAGTGCAGGGATCCCGCAGGCTCCATCCTCTCCACGTGCTCTGCAGCC
530 2540 2550 2560 2570 2580

90 2400 2410 2420 2430 2440
ATGGAGAACAGCTGTTTGGGGGATTCGGCGGATTCGGCGGACGGGCTGCTCGGTTTGGTGG
ATGGAGAACAGCTGTTTGGGGGATTCGGCGGATTCGGCGGACGGGCTGCTCGGTTTGGTGG
10 2610 2620 2630 2640 2650

2470 2480 2490 2500 2510
GTGACACCTCACCTCACCCACGCGAAACCTTCCTCAGGACCCCTGGTCCGAGGTGTCC
GTGACACCTCACCTCACCCACGCGAAACCTTCCTCAGGACCCCTGGTCCGAGGTGTCC
2680 2690 2700 2710 2720

2540 2550 2560 2570 2580 2590
GTGTGAACCTTGCGGAAGACAGTGTGAACCTTCCTGTAGAGACGAGGCCCTGGGTG
GTGTGAACCTTGCGGAAGACAGTGTGAACCTTCCTGTAGAGACGAGGCCCTGGGTG
2750 2760 2770 2780 2790 2800

2610 2620 2630 2640 2650 2660
CAGATGCCGGCCACGGCCTATTCCTGCTGGTGGCCTGCTGGTGGATACCCGACCC
2820 2830 2840 2850 2860 2870

2680 2690 2700 2710 2720 2730
GACTACTCCAGCTATGCCCGGACCTCCATCAGAGCCAGTCTCACCTTCAACCGCGCT
890 2900 2910 2920 2930 2940

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AATCGTGCAGCAACTCTTTGGGCTTTGGGCTGAAGTGTACAGCCTGTTTCTGG
AATCGTGCAGCAACTCTTTGGGCTTTGGGCTGAAGTGTACAGCCTGTTTCTGG
0 2970 2980 2990 3000 3010

2830 2840 2850 2860 2870
AGCCTCCAGACGGTGTGCACCAACATCTACAAGATCCTCTGCTGCAGGCGTACAGGT
AGCCTCCAGACGGTGTGCACCAACATCTACAAGATCCTCTGCTGCAGGCGTACAGGT
3040 3050 3060 3070 3080

2900 2910 2920 2930 2940 2950
CTGCAGCTCCCATTTTCATCAGCAAGTTTGAAGAACCCACATTTTCTGCGCGTCA
CTGCAGCTCCCATTTTCATCAGCAAGTTTGAAGAACCCACATTTTCTGCGCGTCA
3110 3120 3130 3140 3150 3160

2970 2980 2990 3000 3010 3020
TCCCTCTGCTACTCCATCCTGAAAGCCCAAGACCGAGGATGCTGGGGCCAGG
TCCCTCTGCTACTCCATCCTGAAAGCCCAAGACCGAGGATGCTGGGGCCAGG
3180 3190 3200 3210 3220 3230

3040 3050 3060 3070 3080 3090
CTGCCCCCGAGGCCGTGAGTGGCTGTGCCACCAAGCATTCCTGCTCAAGTGACTC
CTGCCCCCGAGGCCGTGAGTGGCTGTGCCACCAAGCATTCCTGCTCAAGTGACTC
250 3260 3270 3280 3290 3300

10 3120 3130 3140 3150 3160
TACGTGCCACTCCTGGGGTCACTCAGGACAGCCCGAGCGAGCTGAGTCGGAAGCTCC

|||||
GACACCGTGTACCTACGTGCACTCCTGGGTCACTCAGGACAGCCAGCGAGCTGAGTCGG
3310 3320 3330 3340 3350 3360 3370

3170 3180 3190 3200 3210 3220 3230
CGGGACGACGCTGACTGCCCTGGAGCCCGCAGCCAAACCGGCACTGCCCTCAGACTTCAAGACC
CGGGACGACGCTGACTGCCCTGGAGCCCGCAGCCAAACCGGCACTGCCCTCAGACTTCAAGACC
3380 3390 3400 3410 3420 3430 3440

3240 3250 3260 3270 3280 3290 3300
ACTGATGGCCACCCGCCACAGCCAGCCGAGAGAGACAGCAGCCCTGTACGCCGGGCTC
ACTGATGGCCACCCGCCACAGCCAGCCGAGAGAGACAGCAGCCCTGTACGCCGGGCTC
3450 3460 3470 3480 3490 3500 3510

3320 3330 3340 3350 3360 3370
CAGGAGGGAGGGCGGCCACACCCAGCCCGCAGCCGCTGGGAGTCTGAGGCCCTGAGTGAGTGT
CAGGAGGGAGGGCGGCCACACCCAGCCCGCAGCCGCTGGGAGTCTGAGGCCCTGAGTGAGTGT
3530 3540 3550 3560 3570 3580

3390 3400 3410 3420 3430 3440 3450
AGCCTGTCATGTCCGGCTGAAGGCTGAGTGTCCGGCTGAGGCCCTGAGCGAGTGTCCAGCCAAAGG
AGCCTGTCATGTCCGGCTGAAGGCTGAGTGTCCGGCTGAGGCCCTGAGCGAGTGTCCAGCCAAAGG
3600 3610 3620 3630 3640 3650 3660

3460 3470 3480 3490 3500 3510 3520
TCCAGCACACCTGCCGTCTTCACTTCCCCACAGGTGGCGCTCGGCTCCACCCAGGGCCAGCTT
TCCAGCACACCTGCCGTCTTCACTTCCCCACAGGTGGCGCTCGGCTCCACCCAGGGCCAGCTT
3670 3680 3690 3700 3710 3720 3730

3530 3540 3550 3560 3570 3580 3590
CCAGAGCCCGGCTTCCACTCCCCACATAGGAATAGTCCATCCCCAGATTCCGCATTGTTCACCC
CCAGAGCCCGGCTTCCACTCCCCACATAGGAATAGTCCATCCCCAGATTCCGCATTGTTCACCC
3740 3750 3760 3770 3780 3790 3800

3600 3610 3620 3630 3640 3650 3660
TGCCCTCCTTTGCCCTTCCACCCCACTCCAGGTGGAGACCCCTGAGAAGGACCCCTGGAGCTCT
TGCCCTCCTTTGCCCTTCCACCCCACTCCAGGTGGAGACCCCTGAGAAGGACCCCTGGAGCTCT
3810 3820 3830 3840 3850 3860 3870

3680 3690 3700 3710 3720 3730
TGGAGTGACCAAGGTGTGCCCTGTACACAGGGCAGGACCCCTGCACCTGGATGGGGTCCCTGTGC
TGGAGTGACCAAGGTGTGCCCTGTACACAGGGCAGGACCCCTGCACCTGGATGGGGTCCCTGTGC
3890 3900 3910 3920 3930 3940

3750 3760 3770 3780 3790 3800 X 3810
TTGGGGGAGGTGCTGTGGGAGTAAATACTGAATATATGAGTTTTTTCAGTTTTGAAAAAAAF
TTGGGGGAGGTGCTGTGGGAGTAAATACTGAATATATGAGTTTTTTCAGTTTTGAAAAAA
3960 3970 3980 3990 4000 4010 X

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us-09-424-686f-10.res

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ise Comparison of Sequences

424-686f-10.res made by tport on Tue 20 Apr 104 13:41:22-PDT.

g compared:US-09-424-686F-10 (1-3824)
 searched: 74
 ove cutoff: 74

e initial comparison of US-09-424-686F-10 (1-3824) with:
809.seq

63	844	1125	1407	1688	1969	2251	2532
2	3	4	5	6	7	8	

PARAMETERS

Unitary	K-tuple
1	Joining penalty
5.00	Window size
0.33	
	4
	30
	500

SEARCH STATISTICS

Mean	Median	Standard Deviation
68	14	315.92

	CPU	Total Elapsed
	00:00:00.01	00:00:00.00

31716	74
;	searched:
31716	74
;	above cutoff:

re sorted by initial score.
culated based on initial score.

sequence to the query sequence was not found.

is: Bero:

Sequence Name	Description	Length	Score	Init. Opt. S
**** 7 standard deviations above mean ****				
1. US-08-851-843A-2	Sequence 224, Application	4015	2532	3716

1. US-09-424-686F-10 (1-3824)
US-08-851-843A-2 Sequence 224, Application US/08851843A

Initial Score	=	2532	Optimized Score	=	3716	Significance	=
Residue Identity	=	94%	Matches	=	3797	Mismatches	=
Gaps	=	218	Conservative Substitutions	=			=

GTTTCAGGCAGCGCTGCGTCTGCTGCGCACGTGGGAAGCCCTGGCCGCCGCCGCCGCGATGCC
 GCAGCGCTGCGTCTGCTGCGCACGTGGGAAGCCCTGGCCGCCGCCGCCGCGATGCC
 X

CTCCCGCTGCCGAGCCGCTGGCTCCCTGCTGCGCAGCCACTACCGCGAGGTGCTGCCGCTGGCCCA
CTCCCGCTGCCGAGCCGCTGGCTCCCTGCTGCGCAGCCACTACCGCGAGGTGCTGCCGCTGGCCCA

	150	160	170	180	190	200	210
TGGGCGCCTGGGGCCCCAGGGTTGGCGGTGGTGACGCCGGGACCCCGCGGCTTTCGCGCGCT							
TGGGCGCCTGGGGCCCCAGGGTTGGCGGTGGTGACGCCGGGACCCCGCGGCTTTCGCGCGCT							

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GCCTGAAGGAGCTGGTGGCCCGAGTCTGCAGAGGCTGTCCGAGCGCGCGGAAGAACGTGCTGGT
GCCTGAAGGAGCTGGTGGCCCGAGTCTGCAGAGGCTGTCCGAGCGCGCGGAAGAACGTGCTGGT

370 380 390 400 410 420
GCTTCGCGCTGCTGGACGGGGCCGCGGGGGCCCCCGAGGCCCTTACCCACGAGCGTGCGCAGCT.
GCTTCGCGCTGCTGGACGGGGCCGCGGGGGCCCCCGAGGCCCTTACCCACGAGCGTGCGCAGCT.
GCTTCGCGCTGCTGGACGGGGCCGCGGGGGCCCCCGAGGCCCTTACCCACGAGCGTGCGCAGCT.

440 450 460 470 480 490
CCAAACCGTGACCGACGCACTGGGGGGAGCGGGCGTGGGGCTGTGCTGCGCCGCGTGGGCG
CCAAACCGTGACCGACGCACTGGGGGGAGCGGGCGTGGGGCTGTGCTGCGCCGCGTGGGCG
CCAAACCGTGACCGACGCACTGGGGGGAGCGGGCGTGGGGCTGTGCTGCGCCGCGTGGGCG

510 520 530 540 550 560 570
TGCTGGTTACCTGCTGGCACGCTGCGCGCTCTTTGTGCTGGTGGTCCAGCTCGCCTACCCAGG
TGCTGGTTACCTGCTGGCACGCTGCGCGCTCTTTGTGCTGGTGGTCCAGCTCGCCTACCCAGG

GGCGCGGCTGTACAGCTCGGCGTGCACCTCAGGCCGGCCCCCGCCACACGCTAGTGACCCC
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GGCGCGGCTGTACAGCTCGGCGTGCACCTCAGGCCGGCCCCCGCCACACGCTAGTGACCCC
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550 660 670 680 690 700 710
GTCGGGATGCGAACGGGGCCTGGAAACCATAGCGTCAGGGAGGCGGGGTCCCCCTGGGCCTGCCAG
GTCGGGATGCGAACGGGGCCTGGAAACCATAGCGTCAGGGAGGCGGGGTCCCCCTGGGCCTGCCAG

CAGCAGTGGCCTCTTCGACGTCTTCTCCTACGCTTCATGTGCCACACGCGCTGGCA
2460 2470 2480 2490 2500 2510

320 2330 2340 2350 2360 2370
ACGTCCAGTCCAGGGGATCCCGCAGGGCTCCATCTCTCCACGCTGCTTCGAGCC
|||||
ACGTCCAGTCCAGGGGATCCCGCAGGGCTCCATCTCTCCACGCTGCTTCGAGCC
30 2540 2550 2560 2570 2580

3 2400 2410 2420 2430 2440
TGGAGAACAGCTGTTGCGGGGATTCGGCGGGACGGGCTGCTCCTGCGTTGGTGG
|||||
TGGAGAACAGCTGTTGCGGGGATTCGGCGGGACGGGCTGCTCCTGCGTTGGTGG
2610 2620 2630 2640 2650

2470 2480 2490 2500 2510
TGACACCTCACCTCACCCAGCGGAAACCTTCCCTCAGGACCTGGTCCGAGGTGCC
|||||
TGACACCTCACCTCACCCAGCGGAAACCTTCCCTCAGGACCTGGTCCGAGGTGCC
2680 2690 2700 2710 2720

2540 2550 2560 2570 2580 2590
TGGTGAACCTTGCGGAAGACAGTGGTGAACTTCCCTGTAGAAGACGAGGCCCTGGGTG
|||||
TGGTGAACCTTGCGGAAGACAGTGGTGAACTTCCCTGTAGAAGACGAGGCCCTGGGTG
2750 2760 2770 2780 2790 2800

2610 2620 2630 2640 2650 2660
AGATGCCGGCCACCGCCCTATTCCTTGGTGGGCTGCTGCTGGATACCCGAGCCC
|||||
AGATGCCGGCCACCGCCCTATTCCTTGGTGGGCTGCTGCTGGATACCCGAGCCC
2820 2830 2840 2850 2860 2870

680 2690 2700 2710 2720 2730
ACTACTCCAGCTATGCCCGGACCTCCATCAGAGCCAGTCTCACCTTCAACCGCGCT
|||||
ACTACTCCAGCTATGCCCGGACCTCCATCAGAGCCAGTCTCACCTTCAACCGCGCT
90 2900 2910 2920 2930 2940

0 2760 2770 2780 2790 2800
ACATGCGTCGCAAACTCTTTGGGGTCTTGGCGGTGAAGTGTACAGCCTGTTCTGG
|||||
ACATGCGTCGCAAACTCTTTGGGGTCTTGGCGGTGAAGTGTACAGCCTGTTCTGG
2970 2980 2990 3000 3010

2830 2840 2850 2860 2870
GCCTCCAGACGGTGTGCACCAACATCTACAAGATCCTCCTGCTGCAGGCGGTACAGT
|||||
GCCTCCAGACGGTGTGCACCAACATCTACAAGATCCTCCTGCTGCAGGCGGTACAGT
3040 3050 3060 3070 3080

2900 2910 2920 2930 2940 2950
TGACGCTCCCATTTTCATCAGCAAGTTTGAAGAACCCCAATTTTCTGCGCGTCA
|||||
TGACGCTCCCATTTTCATCAGCAAGTTTGAAGAACCCCAATTTTCTGCGCGTCA
3110 3120 3130 3140 3150 3160

2970 2980 2990 3000 3010 3020
CCCTCTGCTACTCCATCCTGAAGCAAGAACGAGGATGCTCGCTGGGGCCAAAG
|||||
CCCTCTGCTACTCCATCCTGAAGCAAGAACGAGGATGCTCGCTGGGGCCAAAG
3180 3190 3200 3210 3220 3230

040 3050 3060 3070 3080 3090
TGCCCTCCGAGGCGGTGAGTGGTGTGCCACCAAGCATTCCTGCTCAAGCTGACTC
|||||
TGCCCTCCGAGGCGGTGAGTGGTGTGCCACCAAGCATTCCTGCTCAAGCTGACTC
50 3260 3270 3280 3290 3300

0 3120 3130 3140 3150 3160
ACGTGCCACTCCTGGGGTCACTCAGGACAGCCAGCGCAGCTGAGTCGGAAGCTCC

|||||
GACACCGTGTACCTACGTGCCACTCCTGGGTCACTCAGGACAGCCAGCAGCTGAGTCGAA
3310 3320 3330 3340 3350 3360 3370

3170 3180 3190 3200 3210 3220 3230
CGGGACGACGCTGACTGCCCTGGAGGCCGAGCCAAACCGGCACTGCCCTCAGACTTCAAGACCAT
|||||
CGGGACGACGCTGACTGCCCTGGAGGCCGAGCCAAACCGGCACTGCCCTCAGACTTCAAGACCAT
3380 3390 3400 3410 3420 3430 3440

3240 3250 3260 3270 3280 3290 3300
ACTGATGGCCACCCCGCCACAGCCAGGCCGAGAGCAGACACCCAGAGCCCTGTCAAGCCGGGCTCTA
|||||
ACTGATGGCCACCCCGCCACAGCCAGGCCGAGAGCAGACACCCAGAGCCCTGTCAAGCCGGGCTCTA
3450 3460 3470 3480 3490 3500 3510

3320 3330 3340 3350 3360 3370 3
CAGGAGGGAGGGGGCCGCCACACCCAGGCCCGCACCGCTGGGAGTCTGAGGCCCTGAGTGATT
|||||
CAGGAGGGAGGGGGCCGCCACACCCAGGCCCGCACCGCTGGGAGTCTGAGGCCCTGAGTGATT
3530 3540 3550 3560 3570 3580 35

3390 3400 3410 3420 3430 3440 345
AGGCCTGCATGTCCGGCTGAAGGCTGAGTGTCCGGCTGAGGCCCTGAGCGAGTGTCCAGCCAAAGGCT
|||||
AGGCCTGCATGTCCGGCTGAAGGCTGAGTGTCCGGCTGAGGCCCTGAGCGAGTGTCCAGCCAAAGGCT
3600 3610 3620 3630 3640 3650 3660

3460 3470 3480 3490 3500 3510 3520
TCCAGCACACCTGCGCTCTTCACTTCCCCACAGGCTGGCGTCCGCTCCACCCAGGGCCAGCTTTT
|||||
TCCAGCACACCTGCGCTCTTCACTTCCCCACAGGCTGGCGTCCGCTCCACCCAGGGCCAGCTTTT
3670 3680 3690 3700 3710 3720 3730

3530 3540 3550 3560 3570 3580 3590
CCAGGAGCCCGGCTTCCACTCCCCACATAGGAATAGTCCATCCCCAGATTGCGCATTTGTTCAACCCCT
3740 3750 3760 3770 3780 3790 3800

3600 3610 3620 3630 3640 3650 3660
TGCCCTCCTTTGCTTCCACCCCGCCATCCAGGTGGAGACCCCTGAGAAGGACCCCTGGGAGCTCTGG
|||||
TGCCCTCCTTTGCTTCCACCCCGCCATCCAGGTGGAGACCCCTGAGAAGGACCCCTGGGAGCTCTGG
3810 3820 3830 3840 3850 3860 3870

3680 3690 3700 3710 3720 3730 3
TGGAGTGACCAAGGTGTGCCCTGTACAGGCGAGGACCCCTGCACCTGGATGGGGTCCCTGTGGG
|||||
TGGAGTGACCAAGGTGTGCCCTGTACAGGCGAGGACCCCTGCACCTGGATGGGGTCCCTGTGGG
3890 3900 3910 3920 3930 3940 395

3750 3760 3770 3780 3790 3800 X 381
TTGGGGGAGGTGCTGTGGGAGTAAATACTGAATATATAGTTTTTTCAGTTTTTGAATAAAAAA
|||||
TTGGGGGAGGTGCTGTGGGAGTAAATACTGAATATATAGTTTTTTCAGTTTTTGAATAAAAA
3960 3970 3980 3990 4000 4010 X

3820
AAAAA